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ANNOTATED CHECKLIST OF QUEENSLAND HEPATICAE

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Summary

A checklist is presented of all current binomials known from Queensland, together with synonyms relative to Queensland specimens or literature dealing specifically with such specimens. Footnotes are employed to expand on points of particular interest and a table of distributions is given, based on a proposal using four regional divisions. Genera in the checklist are numbered consecutively and are cross-referenced to an alphabetical index of genera. Notes on the history of hepatic research in Queensland and on the principal collections of Queensland specimens are also included.

History of hepatic research in Queensland

Throughout approximately 150 years of European settlement in Queensland, up to the 1970's, hepatic research has been confined to very limited collecting both in terms of the number of specimens obtained and the geographical area covered (Everist 1982). This work was undertaken by no more than a dozen people who, apart from one or two exceptions, were not directly involved with nor had any particular interest in hepatics as such. Only within the last decade has any comprehensive approach been attempted and as a result our understanding of the species present, their distributions, habitats, ecological peculiarities and affinities with overseas taxa is still very much in the formative stage.

The first positive mention of Queensland hepatics was made by F.M. Bailey soon after he became Colonial Botanist in 1881. Bailey was a man of almost unlimited energy and he found time to indulge an interest in the lower plants as well as carrying out his more formal work assignments. Most of his collecting was done in south-eastern Queensland but he made one trip to the northern Queensland rainforests of the Bellenden Ker Range area which resulted in a considerable number of new taxa being discovered. Other collectors of hepatics at this time include C.J. Wild, C.J. Gwyther, J. Shirley and J.H.Simmonds. Apart from listing the taxa found, Bailey did not systematically study the local hepatic flora. Most specimens were sent overseas for identification, the majority to Stephani in Leipzig, East Germany who retained any types and specimens of particular interest.

Since Bailey's work at the turn of the century virtually no interest was taken in hepatics for over 60 years. During 1963/64 Dr H.J. Hewson, Bureau of Fauna and Flora, Canberra, made extensive collections of *Aneura* and *Riccardia* in northern Queensland as a foundation for her revision of the family Aneuraceae in Australia and New Guinea (Hewson 1969, 1970). In the late 1970's a few visiting bryologists, realizing that Australia and in particular Queensland contained a vast storehouse of understudied material, did some minor collecting. However, most amounted to little more than one or two day recreational type excursions and largely covered the same ground as Bailey and his associates nearly a century before. It is only within the last six years that properly organized, extensive collecting has been undertaken. From 1980 onward I have systematically collected the area between Brisbane and Rockhampton and have lodged checklists with the Queensland Herbarium (BRI). I have studied habitat and ecological relationships in some environmentally significant areas and also reviewed and collated the collection of the Queensland Herbarium. Other notable collections have been made by Dr Marie L. Hicks of the Appalachian State University, in the rainforest belt between Tully and Daintree and Dr Barbara M. Thiers of New York Botanic Gardens in preparation for her pending review of the family Lejeuneaceae in Australia.

In spite of the limited amount of time and effort that has been expended on Queensland hepatics, a relatively comprehensive catalogue of taxa is now known, drawn mainly from the South and North Coast Regions (**Map 1.**). This paper aims to present such information as is currently available in the hope that it will help stimulate interest

in further collecting, particularly in the more neglected areas such as the Central Coast Region, Cape York Peninsula and the Gulf Country.

Collections of Queensland Hepaticae

The Queensland Herbarium collection numbers about 650 specimens of Australian hepatics, over half of which date from last century. Many of these are in poor condition and very few are suitable for serious taxonomic work. Approximately one third of the early collections are from interstate, having been supplied to Bailey for comparative purposes. Many were not clearly marked and it is often difficult to tell which are Queensland specimens. Hewson provided the Herbarium with some 80 specimens of *Aneura* and *Riccardia* following her collecting in the 1960's, among them several isotypes. The majority of the recent acquisitions were donated by me, and I also maintain an extensive personal collection of *Frullania* as well as representative specimens of other Queensland species.

Overseas herbaria which contain sizable collections of Queensland material include the Cryptogamic Herbarium, New York Botanic Gardens, New York, U.S.A. (NY), Appalachian State University, Boone, North Carolina, U.S.A. (BOON), and the Herbarium of the Hattori Botanical Laboratory, Nichinan-shi, Japan (NICH). Duplicates of many of my specimens have been sent to these institutions. The Conservatorie et Jardin Botaniques, Geneva, Switzerland (G) houses the many type specimens of endemic Queensland species which were included in the Stephani Collection.

Total geographical area covered

The total area covered comprises the political entity of the State of Queensland which includes the Torres Strait Islands, the various islands and cays of the Great Barrier Reef, the offshore islands of the southern coast such as Curtis, Fraser, Moreton, Stradbroke, etc., as well as the islands in the Gulf of Carpentaria east of the longitude of the Queensland/Northern Territory border (**Map 1.**).

Regional divisions

For the purposes of depicting distribution patterns, the overall area is divided into four regions based on physical and climatic characteristics (**Map 1.**). In line with the Bureau of Meteorology (1977) regional classification based on rainfall, the initial division corresponds to the easternmost watershed created by the Great Dividing Range and forms the boundary between the Coastal and Inland sections. Preliminary studies show that to the east of this line, the hepatic population is primarily dominated by moisture loving taxa of the Order Jungermanniales, while to the west there is a limited range of species drawn from what are generally regarded as the xeromorphic genera (*Targionia*, *Riccia*, etc.) of the Order Marchantiales. The Coastal section is further subdivided into three regions, the South Coast, Central Coast and North Coast. The boundaries between these regions are in the vicinity of Rockhampton and Ayr and again correspond to those of the meteorological districts. There does not seem to be any justification in further sub-dividing the Inland section.

The wetter areas supporting the most diversified and prolific hepatic flora tend to occur towards the centre of each coastal region, while the boundary areas equate closely with belts of lower rainfall. As a result the number and range of taxa in the vicinity of the boundaries is small, thus suggesting the concept of natural hepatic regions corresponding to the regional divisions of the State proposed here.

Arrangement of the checklist

The classification employed in the arrangement of the checklist is that of Schuster (1979). The primary reasons for choosing this system are:

a. It is based on widely accepted, modern views regarding the evolution of the Hepaticae.

b. Detailed descriptions of the taxa are in readily available publications.

c. It lends itself to herbarium use in that it is compatible with other systems already established in various overseas herbaria.

In this system Schuster set down seven Orders within the Hepaticae. Of these only three have been reported from Queensland: Jungermanniales, Metzgeriales and Marchantiales. The checklist is divided into sections corresponding to these Orders and is then further subdivided according to Schuster's arrangement for families and genera. The names of the Orders are in **BOLD CAPITALS** and the names of families and genera are in **bold Upper and lower case.** Species and any subspecific taxa are subsequently arranged alphabetically.

Taxa reported in recognized literature or known to exist as specimens are considered legitimate. Synonoms relative to Queensland specimens or names under which these specimens have been recorded are given in *italics* immediately beneath the current name. Specimen references are given for all taxa cited as sp.

All genera in the checklist are numbered consecutively with the numbers cross-referencing to the alphabetical index of genera following the checklist.

Abbreviations used in the checklist

STH(S)	South Coast Region	Species reliably reported to occur in that region.
CNT(C)	Central Coast Region	
NTH(N)	North Coast Region	
INL(I)	Inland Region	
?	Report of species in that particular region is either not considered reliable or the locality is not positively known and its occurrance in that region is presently tentative.	
‡	Little is known about the reported occurrance of this species in Queensland and its inclusion should be treated cautiously pending further investigation.	
1.2.3.	Cross-reference numbering, for genera.	
(1) (2)	Footnote numbering.	

Reliability of information

As many reports of Queensland hepatics date back almost a hundred years and are often contained in obscure and difficult to obtain literature, not all have been personally investigated. In some cases it has been necessary to resort to second-hand information but every attempt has been made to ascertain the reliability of all data used. Only comprehensive revisions of families and genera involving detailed comparative studies with overseas specimens can resolve the many taxonomic and nomenclatural problems which remain. A list of the literature used in compiling the checklist is given in Appendix A.

Acknowledgements

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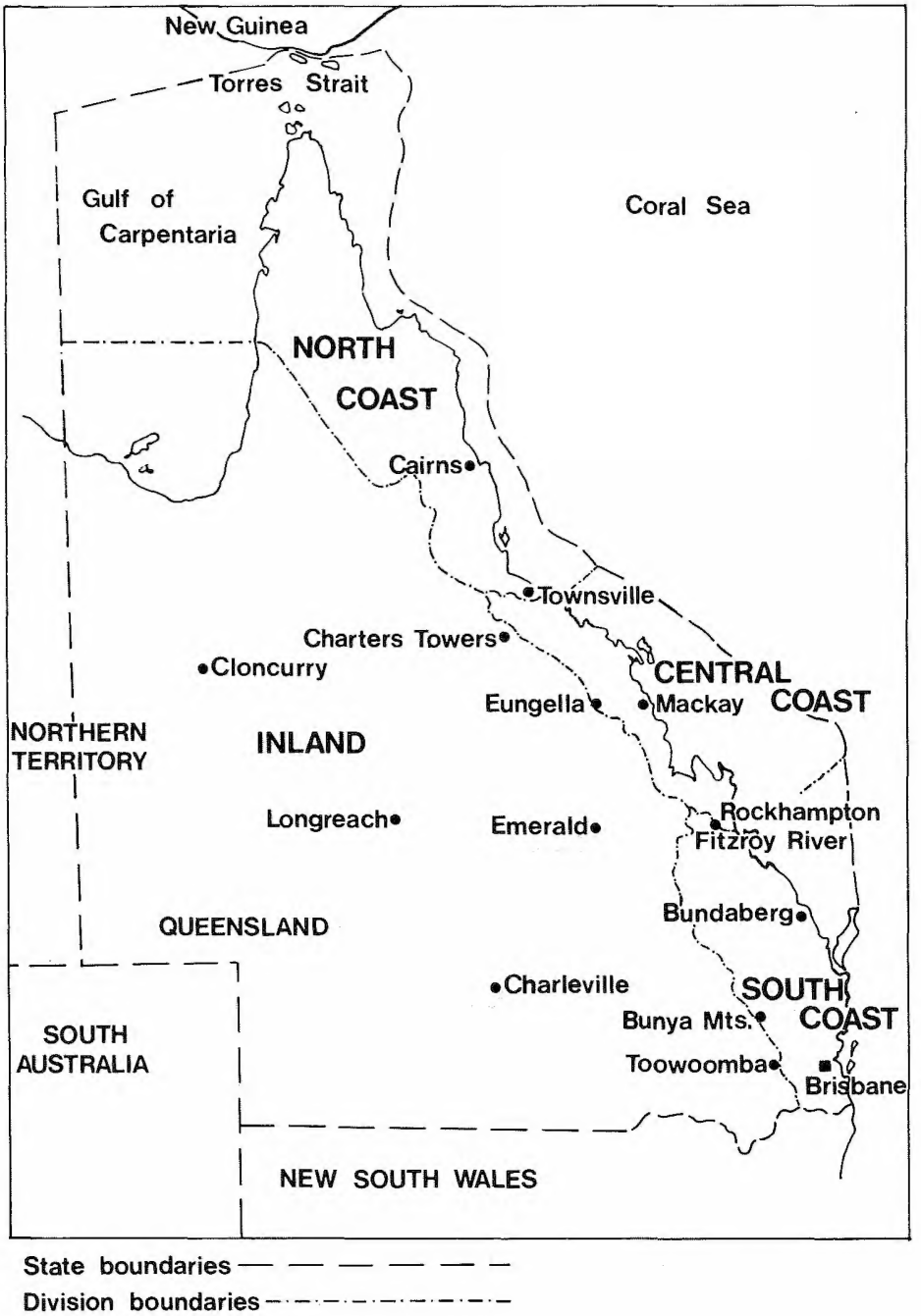

Map 1. Queensland showing proposed regional hepatic divisions.

CHECKLIST AND DISTRIBUTION OF TAXA

Botanical Name	Region				
	STH	CNT	NTH	INL	NOTES
JUNGERMANNIALES					
Trichocoleaceae					
1. Trichocolea Dumort.					
T. pluma (Reinw., Blume & Nees) Mont. *Jungermannia pluma* Reinw., Blume & Nees			N		
Lepidoziaceae					
2. Lepidozia (Dumort.) Dumort.					
L. eeni S. Arnell			N		‡
L. laevifolia (J.D.Hook. & Tayl.) Tayl. *Jungermannia laevifolia* J.D.Hook. & Tayl.	S		N		
L. procera Mitt.			N		
L. sp. (Windolf 739,1136)	S				
3. Kurzia von Martens					
K. calcarata (Steph.) Grolle *Lepidozia calcarata* Steph.	S				‡
K. compacta (Steph.) Grolle *Lepidozia compacta* Steph.	S				
K. hippurioides (J.D.Hook. & Tayl.) Grolle *Jungermannia hippurioides* J.D.Hook. & Tayl. *Lepidozia capillaris* (Sw.) Lindenb.	S				
K. lateconica (Steph.) Grolle *Lepidozia lateconica* Steph. *Microlepidozia lateconica* (Steph.) Fulf. & J.Tayl.			N		‡
K. reversa (Carr. & Pears.) Grolle *Lepidozia reversa* Carr. & Pears. *Psiloclada reversa* (Carr. & Pears.) Schiffn.	S				
4. Telaranea Spr. ex Schiffn.					
T. capilligera (Schwaegr.) Schust. *Jungermannia capilligera* Schwaegr. *Lepidozia capilligera* (Schwaegr.) Lindenb.	S				‡ (1)
T. centipes (Tayl.ex Gott., Lindenb. & Nees) Schust. *Lepidozia centipes* Tayl. ex Gott., Lindenb. & Nees	S				
T. dispar (Mont.) Hodgs. *Lepidozia dispar* Mont.	S				

(1) Possibly conspecific with *Telaranea dispar* (Scott 1985).

T. tetradactyla (J.D.Hook & Tayl.) Hodgs. *Jungermannia tetradactyla* J.D.Hook. & Tayl.			N	‡	(2)
5. Bazzania S.F.Gray					
B. accreta (Lehm. & Lindenb.) Trev. *Mastigobryum accretum* Lehm. & Lindenb.			N		(3)
B. adnexa (Lehm. & Lindenb.) Trev. *Jungermannia adnexa* Lehm. & Lindenb. *Mastigobryum novae-hollandiae* Lindenb. & Gott. ex Nees	S	C	N		(4)
B. baileyana (Steph.) Steph. ex Rodw. *Mastigobryum baileyanum* Steph.	S				
B. filiformis Steph. *Mastigobryum filiforme* (Steph.) Steph.			N	‡	
B. involuta (Mont.) Trev. *Herpetium involutum* Mont.	S	C	N		(5)
B. mittenii (Steph.) Steph. *Mastigobryum mittenii* Steph.	S		N	‡	
B. novae-zelandiae (Mitt.) Besch. & Massal. *Mastigobryum novae-zelandiae* Mitt.			N	‡	
6. Acromastigum Evs.					
A. colensoanum (Mitt.) Evs. ex Reim. *Mastigobryum colensoanum* Mitt.			N		
7. Zoopsis (J.D.Hook. & Tayl.) J.D.Hook.					
Z. argentea (J.D.Hook. & Tayl.) J.D.Hook. *Jungermannia argentea* J.D.Hook. & Tayl. *Cephalozia argentea* (J.D.Hook & Tayl.) Lindenb.	S	C	N		
Z. setulosa Leit. *Cephalozia setulosa* (Leit.) Spr.	S		N		
8. Hyalolepidozia S.Arnell					
H. sp. aff. H. longiscypha (Tayl.) Grolle (Windolf 569,570)	S				
Cephaloziellaceae					
9. Cephaloziella (Spr.) Schiffn.					
C. arctica Bryhn & Douin	S				
C. exiliflora (Tayl.) Douin *Jungermannia exiliflora* Tayl.	S				
C. hirta (Steph.) Schust. *Cephalozia hirta* Steph.	S				

(2) Possibly a misidentification for *Telaranea dispar* but because of its great geographical separation from other confirmed occurrences of that species, it has been retained here.

(3,4,5) All three species are possibly conspecific according to Scott (1985) but considering the poor understanding of the genus in Australia, all names under which Queensland specimens have been recorded have been listed here.

Jackiellaceae

10. Jackiella Schiffn.

J. javanica Schiffn. N

Jungermanniaceae

11. Chandonanthus Mitt.

C. hirtellus (Web.) Mitt. N
Jungermannia hirtella Web.

12. Anastrophyllum (Spr.) Steph.

A. piligerum (Reinw., Blume & Nees) Steph. N
Jungermannia piligera Reinw., Blume & Nees

13. Andrewsianthus Schust.

A. puniceus (Nees) Schust. N ‡
Jungermannia punicea Nees

14. Cuspidatula Steph.

C. monodon (Tayl. ex Lehm.) Steph. N
Jungermannia monodon Tayl. ex Lehm.

15. Jungermannia L.

J. hasskarliana (Nees) Steph. N
Alicularia hasskarliana Nees

J. orbiculata (Col.) Grolle N ‡
Gymnomitrium orbiculatum Col.
Nardia fragilis Steph. ex Bailey

J. wattsiana Steph. S N
Jungermannia karsteniana Beauv.
Jungermannia montana (Steph.) Steph.
Nardia montana Steph.
Plectocolea eenii S.Arnell
Solenostoma australe Steph.

16. Notoscyphus Mitt.

N. lutescens Schiffn. N

Geocalycaceae

17. Lophocolea (Dumort.) Dumort.

L. biciliata (J.D.Hook. & Tayl.) Mitt. S
Jungermannia biciliata J.D.Hook. & Tayl.

L. semiteres (Lehm. & Lindenb.) Mitt. S C
Jungermannia semiteres (Lehm. & Lindenb.) Mitt.
Lophocolea heterophylloides Nees

18. Chiloscyphus Corda

C. argutus (Reinw., Blume & Nees) Nees S C N
Jungermannia arguta Reinw., Blume & Nees
var. spathulifolius Steph. S ‡

C. communis Steph.		N	‡
C. fissistipus (J.D.Hook. & Tayl.) Tayl. *Jungermannia fissistipa* J.D.Hook. & Tayl.	S		
C. triacanthus (J.D.Hook. & Tayl.) Steph. *Lophocolea triacantha* J.D.Hook. & Tayl.	S		
Plagiochilaceae			(6)
19. Plagiochila (Dumort.) Dumort.			
P. abietina (Nees) Lindenb. *Jungermannia abietina* Nees		N	
P. acutifolia Steph.		N	
P. arbuscula (Bridel ex Lehm. & Lindenb.) Lindenb. *Jungermannia arbuscula* Bridel ex Lehm. & Lindenb.		N	
P. baileyana Steph. *P. conturbata* Steph.		N	
P. bantamensis (Reinw., Blume & Nees) Lindenb. *Jungermannia bantamensis* Reinw., Blume & Nees		N	
P. blepharophora (Nees) Nees *Jungermannia blepharophora* Nees		N	
P. dendroides (Nees)Lindenb. *Jungermannia dendroides* Nees		N	
P. fasciculata Lindenb.	S	N	
P. fruticella (J.D.Hook. & Tayl.) J.D.Hook. & Tayl. *Jungermannia fruticella* J.D.Hook. & Tayl. *P. dicksonii* J.D.Hook. & Tayl.	S		‡
P. furcata Steph.		N	
P. hicksii Inoue		N	
P. lyallii Mitt.	S		‡
P. mittenii Steph.		N	‡
P. obscura Col.		N	
P. obtusa Lindenb.		N	
P. pleurata (Tayl.) J.D.Hook. & Tayl. *Jungermannia pleurata* Tayl.	S		
P. pseudobtusa Inoue		N	
P. queenslandica Steph. *P. bellenderiensis* Steph. *P. multifurcata* Steph. *P. teysmannii* Sande Lac.	S	N	
P. renitens (Nees) Nees *Jungermannia renitens* Nees		N	

(6) The situation regarding several species of *Plagiochila* needs clarification but a thorough revision dealing specifically with Queensland specimens would be required. The status of some species and their synonomy as listed here may ultimately be modified.

P. semidilatata Inoue		N		
P. sydneyensis Beauv.		N		
P. trapezoidea Lindenb.		N		
P. vitiensis Mitt. *P. brotheri* Steph.		N		
P. wattsii Steph. ex Rodw.	S			
20. Plagiochilion Hatt.				
P. oppositus (Reinw., Blume & Nees) Hatt. *Jungermannia opposita* Reinw., Blume & Nees		N		
Acrobolbaceae				
21. Lethocolea Mitt.				
L. squamata (Tayl.) Hodgs. *Podanthe squamata* Tayl. *Noteroclada confluens* auct. non J.D.Hook. & Tayl.; Windolf (BRI).	S			(7)
22. Goebelobryum Grolle				
G. unguiculatum (J.D.Hook. & Tayl.) Grolle *Jungermannia unguiculata* J.D.Hook. & Tayl. *Goebelobryum grossitextum* (Steph.) Grolle *Gymnanthe unguiculata* (J.D.Hook. & Tayl.) Mitt.	S	N		
Schistochilaceae				(8)
23. Schistochila Dumort.				
S. baileyana Steph.		N	‡	
S. brotheri Steph.		N	‡	
S. cristata Steph.		N		
Balantiopsidaceae				
24. Balantiopsis Mitt.				
B. diplophylla (J.D.Hook. & Tayl.) Mitt. *Jungermannia diplophylla* J.D.Hook. & Tayl. *B. brotheri* Steph.		N		
Pleuroziaceae				
25. Pleurozia Dumort.				
P. articulata (Lindenb.) Schiffn. *Physiotium articulatum* Lindenb.		N		
P. muelleri Steph. *Physiotium muelleri* Gott.		N		

(7) Grolle (pers. comm.) asserts that *Noteroclada* does not occur in Australasia and so the numerous reports of this species over the years are obviously misidentifications. Subsequent examination of numerous Queensland specimens dating back to 1885, show that most, if not all, are in fact *Lethocolea squamata.*

(8) Practically nothing is known regarding Queensland species of *Schistochila.* Schuster and Engel's revision of *Schistochila* should help clarify most points when it is completed. All known binomials have been listed.

Radulaceae

26. **Radula** Dumort.

R. acutiloba Steph.	S		N	
R. buccinifera (J.D.Hook. & Tayl.) Tayl. *Jungermannia buccinifera* J.D.Hook. & Tayl. *R. mittenii* Steph.	S	C	N	
R. hicksiae Yamada			N	
R. javanica Gott. *R. gottscheana* Tayl.			N	
R. jovetiana Yamada			N	
R. kurzii Steph.			N	
R. multiflora Gott. ex Schiffn.			N	
R. novae-hollandiae Hampe	S		N	
R. ocellata Yamada			N	
R. patens Yamada			N	
R. reflexa Nees & Mont.			N	
R. retroflexa Tayl.			N	
var. fauciloba (Steph.) Yamada *R. fauciloba* Steph.	S		N	
R. ventricosa Steph.			N	‡

Mastigophoraceae

27. Mastigophora Nees

M. diclados (Bridel ex Web.) Nees *Jungermannia diclados* Bridel ex Web.			N	

Lepidolaenaceae

28. Lepidolaena Dumort.

L. sp. aff. L. taylorii (Gott.) Trev. *Polyotus taylorii* (Gott.) Trev. *Polyotus* sp. aff. *P. taylorii* (Gott.) Trev. (F.M.Bailey BRI 332127)			N	(9)

Porellaceae

29. Porella L.

P. cranfordii (Steph.) Hatt. *Madotheca cranfordii* Steph.	S		N	
P. queenslandica (Steph.) Hatt. *Madotheca stangeri* Steph.	S			

(9) Based on a single specimen collected last century by F.M. Bailey and now held in the Queensland Herbarium. It is minute and in very poor condition but appears to be as determined, apparently by Stephani. In addition Hattori (1979b) notes that the type of *Frullania fissistipula* Steph. (from Bellender Ker, North Queensland) is in fact a species of *Lepidoleana* but he gives no further details.

Jubulaceae

30. Frullania Raddi

F. allanii Hodgs.	S			
F. apiculata (Reinw., Blume & Nees) Dum. var. parva Hatt.			N	
F. australis Steph.	S		N	
F. baileyana Steph.	S			(10)
F. cataractarum Steph.	S			
F. crassitexta Steph.	S			
F. dietrichiana Steph.	S			
F. difficilis Steph.	S			
F. ericoides (Nees) Mont. *Jungermannia ericoides* Nees *F. squarrosa* (Reinw., Blume & Nees) Nees	S		N	
F. exigua Steph.	S			‡ (11)
F. falciloba Tayl. ex Lehm. *F. forsythiana* Steph.	S	C		
F. ferdinandi-muelleri Steph.	S			
F. flexuosa Hatt.		C		
F. fugax (J.D.Hook. & Tayl.) Tayl. *Jungermannia fugax* J.D.Hook. & Tayl.	S			‡ (12)
F. hicksiae Hatt.			N	
F. johnsonii Steph. *F. hasskarliana* Lindenb. subsp. *queenslandica* Hatt.			N	
F. monocera (J.D.Hook. & Tayl.) Tayl. *Jungermannia monocera* J.D.Hook. & Tayl.	S		N	
var. depauperata Hatt. *F. hampeana* Nees	S			
F. neosheana Hatt.			N	
F. nodulosa (Reinw., Blume & Nees) Nees *Jungermannia nodulosa* Reinw., Blume & Nees			N	
var. plana Schiffn.			N	‡
F. pentapleura Tayl.	S			
F. probosciphora Tayl. *F. reptans* Mitt.	S			‡ (13)

(10) Possibly conspecific with *Frullania yorkiana* (Hattori 1979b, 1984).

(11) *Frullania exigua* is almost certain to be a misidentification but as no specimen has ever been found which equates with the report made by Bailey in 1890 it is impossible to say what the species in fact was.

(12) Bailey's record of *Frullania fugax* in Queensland (1888) seems to be based on a specimen that is very similar to the one that was later (1910) described by Stephani as *Frullania baileyana* but the point needs further study.

(13) The status of *Frullania probosciphora–F. reptans* synonomy and the occurance of the species in Queensland is uncertain.

F. queenslandica Steph.	S				
F. rostrata (J.D.Hook. & Tayl.) J.D.Hook. & Tayl. *Jungermannia rostrata* J.D.Hook. & Tayl.	S		N		
F. rubella Gott. ex Steph. *F. filipendra* Steph.	S	C		I	
var. elongata (Steph.) Hatt. *F. elongata* Steph.	S		N		
F. seriata Gott. ex Steph.	S				
F. serrata Gott.			N		
F. sheana Hatt.			N		
F. simmondsii Steph.	S				
F. spinifera Tayl.	S				‡
F. squarrosula (J.D.Hook. & Tayl.) Tayl. *Jungermannia squarrosula* J.D.Hook. & Tayl.	S	C			
F. subhampeana Hodgs.	S		N		
F. subtropica Steph.	S	C			
F. ternatensis Gott. var. non-appendiculata Hatt.			N		
F. wildii Steph.	S				
F. yorkiana Steph.			N		
F. sp. aff. F. pentapleura Tayl. (Windolf 681,682,910, 941,960)	S				(14)
F. sp. 1. (Windolf 243,250,252)	S				
F. sp. 2. (Windolf 700,701,702)	S				
Lejeuneaceae					(15)
31. Brachiolejeunea (Spr.) Steph.					
B. eavesiana (Gott. & Muell.) Steph. *Phragmicoma eavesiana* Gott. & Muell.			N		‡
B. thozetiana (Gott. & Muell.) Steph. *Phragmicoma thozetiana* Gott. & Muell.	S		N		‡ (16)
32. Caudalejeunea Steph.					
C. reniloba (Gott.) Steph. *Phragmicoma reniloba* Gott.			N		
33. Mastigolejeunea (Spr.) Steph.					
M. humilis (Gott.) Steph. *Phragmicoma humilis* Gott.			N		
M. integrifolius Steph.			N		

(14) Several undescribed species of *Frullania* appear to exist in southern Queensland but so far no fertile material has been collected.

(15) Australian Lejeuneaceae is currently being revised by Dr. Barbara Thiers and this list should be used only as an interim measure.

(16) Possibly conspecific with *Spruceanthus semirepandus* (Thiers pers. comm.).

M. ligulata (Lehm. & Lindenb.) Schiffn. *Phragmicoma ligulata* Lehm. & Lindenb.			N	
M. phaea Gott. ex Steph.	S		N	
34. Lopholejeunea (Spr.) Schiffn.				
L. australis Steph.	S			
L. eulopha (Tayl.) Steph. *Lejeunea eulopha* Tayl. *Lopholejeunea fimbriata* (Gott.) Schiffn.	S		N	
L. hispidissima Steph.	S			
L. loheri Steph.			N	
L. nigricans (Lindenb.) Schiffn. *Lejeunea nigricans* Lindenb.			N	
L. plicatiscypha (J.D.Hook. & Tayl.) Steph. *Phragmicoma plicatiscypha* J.D.Hook. & Tayl.			N	‡
L. subfusca (Nees) Schiffn. *Jungermannia subfusca* Nees	S		N	
35. Acrolejeunea (Spr.) Steph.				
A. arcuata (Nees) Grolle & Grad. *Jungermannia arcuata* Nees			N	
A. aulacophora (Mont.) Steph. *Phragmicoma aulacophora* Mont.	S	C	N	
A. pycnoclada (Tayl.) Schiffn. *Ptychanthus pycnoclada* Tayl.	S		N	
A. securifolia (Nees) Watts ex Steph. *Jungermannia securifolia* Nees *A. wildii* Steph. *Ptychocoleus parvus* Steph.	S			
36. Schiffneriolejeunea Verd.				
S. cumingiana (Mont.) Grad. *Phragmicoma cumingiana* Mont. *Ptychocoleus cumingianus* Steph. *Ptychocoleus novae-guineae* (Steph.) Steph. *Acrolejeunea novae-guineae* Steph.			N	‡
S. tumida (Nees) Grad. var. haskarliana (Gott.) Grad. *Phragmicoma haskarliana* Gott. *S. haskarliana* (Gott.) Grad.	S	C	N	
37. Archilejeunea (Spr.) Schiffn.				
A. mariana (Gott.) Steph. *Lejeunea mariana* Gott.			N	
A. olivacea (J.D.Hook. & Tayl.) Steph. *Jungermannia olivacea* J.D.Hook. & Tayl. *A. scutellata* (Tayl.) Steph.	S		N	

38. Thysananthus Lindenb.			
T. convolutus Lindenb.		N	
T. fruticosus (Lindenb. & Gott.) Steph. *Bryopteris fruticosa* Lindenb. & Gott.		N	‡
T. planus Sande Lac.	S	N	
T. spathulistipus (Reinw., Blume & Nees) Lindenb. *Jungermannia spathulistipa* Reinw., Blume & Nees	S	N	
39. Spruceanthus Verd.			
S. polymorphus (Sande Lac.) Verd. *Lejeunea polymorpha* Sande Lac.		N	
S. semirepandus (Nees) Verd. *Jungermannia semirepanda* Nees	S	N	‡
40. Stictolejeunea (Spr.) Schiffn.			
S. richardii Verd.		N	
41. Ptychanthus Nees			
P. stephensonianus (Mitt.) Steph. *Lejeunea stephensonianus* Mitt. *Ptycholejeunea stephensonianus* Mitt.		N	‡
P. striatus (Lehm. & Lindenb.) Nees *Jungermannia striata* Lehm. & Lindenb.		N	
P. squarrosus Mont. ex Lehm.		N	‡
42. Ceratolejeunea (Spr.) Schiffn.			
C. oceanica (Mitt.) Steph. *Lejeunea oceanica* Mitt.		N	
43. Cheilolejeunea (Spr.) Schiffn.			
C. ceylanica (Gott.) Kachroo & Schust. *Lejeunea ceylanica* Gott.		N	
C. falsinervis (Sande Lac.) Kachroo & Schust. *Lejeunea falsinervis* Sande Lac.	S		
C. intertexta (Lindenb.) Steph. *Lejeunea intertexta* Lindenb.	S	N	
C. longidens (Steph.) Kachroo & Schust. *Pycnolejeunea longidens* Steph.	S	N	
C. mimosa (J.D.Hook. & Tayl.) Schust. *Jungermannia mimosa* J.D.Hook. & Tayl.	S	N	
C. serpentina (Mitt.) Mizut. *Lejeunea serpentina* Mitt.		N	
C. trifaria (Reinw., Blume & Nees) Mizut. *Jungermannia trifaria* Reinw., Blume & Nees *Euosmolejeunea baileyana* Steph.	S	N	

C. vittata (Steph. ex Hoffm.) Schust. *Pycnolejeunea vittata* Steph. ex Hoffm.	S		N		
44. Pycnolejeunea (Spr.) Schiffn.					
P. grandiocellata Steph.			N		
45. Lejeunea Libert					
L. apiculata Sande Lac.	S		N		
L. armitii (Steph.) Steph. *Eulejeunea armitii* Steph.	S			‡	
L. caespitosa Lindenb.	S		N	‡	
L. cucullata (Reinw., Blume & Nees) Nees *Jungermannia cucullata* Reinw., Blume & Nees	S		N		
L. cuspidistipula (Steph.) Steph. *Eulejeunea cuspidistipula* Steph.	S		N		
L. discreta Lindenb.	S		N		
L. drummondii Tayl. *L. tumida* Mitt.	S				
L. exilis (Reinw., Blume & Nees) Grolle *Jungermannia exilis* Reinw., Blume & Nees			N		
L. flava (Sw.) Nees subsp. orientalis Schust. *Eulejeunea flava* (Sw.) Steph.	S	C	N		(17)
L. herzogii Mizut.			N		
L. punctiformis Tayl.	S				
L. sordida Nees *Hygrolejeunea sacculifera* Steph.			N		
46. Harpalejeunea (Spr.) Schiffn.					
H. filicuspis (Steph.) Mizut. *Drepanolejeunea filicuspis* Steph.	S		N		
47. Leucolejeunea Evs.					
L. xanthocarpa (Lehm. & Lindenb.) Evs. *Jungermannia xanthocarpa* Lehm. & Lindenb.			N		
48. Drepanolejeunea (Spr.) Schiffn.					
D. angustifolia (Mitt.) Grolle *Lejeunea angustifolia* Mitt.			N		
D. levicornua Steph.			N		
D. micholitzii Steph. var. micholitzii *D. micholitzii* Steph. var. *genuina* Herz.			N	‡	
D. obliqua Steph.			N	‡	
D. tenuis (Nees) Steph. *Lejeunea tenuis* Nees			N	‡	

(17) All specimens of *Lejeunea flava* are here considered as *L. flava* subsp. *orientalis*. Whether other subspecies or varieties exist in Queensland is not known at this stage.

D. ternatensis (Gott.) Steph. *Lejeunea ternatensis* Gott.	S		N	
D. vesiculosa (Mitt.) Steph. *Lejeunea vesiculosa* Mitt.	S			
49. Leptolejeunea (Spr.) Schiffn.				
L. denticulata Steph.			N	‡
L. epiphylla (Mitt.) Steph. *Lejeunea epiphylla* Mitt.			N	
L. maculata (Mitt.) Schiffn. *Lejeunea maculata* Mitt.	S		N	
50. Colura (Dumort.) Dumort.				
C. australiensis Jovet			N	
C. bisvoluta Herz. & Jovet	S			
C. herzogii Jovet-Ash.			N	
51. Cololejeunea (Spr.) Schiffn.				
C. amphibolus Thiers			N	
C. floccosa (Lehm. & Lindenb.) Steph. *Jungermannia floccosa* Lehm. & Lindenb.			N	
C. leonidens Benedix			N	
C. mamillata (Aongst.) Hodgs. *Lejeunea mamillata* Aongst.	S			
C. maritima Tixier	S	C	N	(18)
C. minutissima (Sm.) Schiffn. *Jungermannia minutissima* Sm.	S			
C. trichomanis (Gott.) Steph. *Lejeunea trichomanis* Gott. *Physocolea trichomanis* (Gott.) Steph.			N	
C. wightii Steph.	S			
METZGERIALES				
Fossombroniaceae				
52. Fossombronia Raddi				
F. papillata Steph.	S		N	
Pallaviciniaceae				
53. Pallavicinia S.F.Gray				
P. lyellii (Hook.) S.F.Gray *Jungermannia lyellii* Hook. *Steetzia lyellii* (Hook.) Lehm.	S	C		

(18) There is considerable variation between specimens from northern and southern regions and there could well be more than one species involved.

54. Symphyogyna Nees				
S. irregularis Steph.			N	‡
S. podophylla (Thunb.) Mont. & Nees *Jungermannia podophylla* Thunb. *Symphyogyna obovata* (J.D.Hook. & Tayl.) Nees	S		N	‡
S. pulchra Tayl.			N	
Hymenophytaceae				
55. Hymenophyton Dumort.				
H. flabellatum (Labill.) Dumort. ex Trev. *Jungermannia flabellata* Labill. *Symphyogyna flabellata* (Labill.) Mont.	S	C		
Aneuraceae				
56. Aneura Dumort.				
A. athertonensis Hewson			N	
A. eachamensis Hewson			N	
57. Riccardia S.F.Gray				
R. babindae Hewson			N	
R. bipinnatifida (Col.) Hewson *Aneura bipinnatifida* Col.	S		N	
R. bliklika Hewson			N	
R. crassa (Schwaegr.) Carr. & Pears. *Jungermannia crassa* Schwaegr. *Aneura stolonifera* Steph.	S			‡
R. hypipamensis Hewson			N	
R. macdonaldiana Hewson			N	
R. rupicola (Steph.) Hewson *Aneura rupicola* Steph.	S	C	N	
R. wattsiana (Steph.) Hewson *Aneura wattsiana* Steph.	S	C	N	
Metzgeriaceae				
58. Metzgeria Raddi				
M. australis Steph.	S			
M. conjugata Lindb.			N	
M. decipiens (Massal.) Schiffn. & Gott. *M. furcata* (L.) Dumort. var. *decipiens* Massal.	S			
M. furcata (L.) Dumort. *Jungermannia furcata* L.	S	C	N	
M. leptoneura Spr. *Metzgeria hamata* Lindb.	S	C	N	
M. saccata Mitt. *Austrometzgeria saccata* (Mitt.) Kuwahara	S			

MARCHANTIALES

Targioniaceae

59. Targionia L.

T. hypophylla L.			I	

Lunulariaceae

60. Lunularia Adanson

L. cruciata (L.) Dumort. *Marchantia cruciata* L. *L. vulgaris* Micheli ex Raddi	S			

Aytoniaceae

61. Reboulia Raddi

R. hemisphaerica (L.) Raddi *Marchantia hemisphaerica* L. *Asterella hemisphaerica* (L.) Beauv. *Plagiochasma queenslandicum* Steph.	S	N		

62. Plagiochasma Lehm. & Lindenb.

P. rupestre (Forst.) Steph. *Aytonia rupestre* Forst. *P. australe* Nees	S	N	I	

63. Asterella Beauv.

A. australis (J.D.Hook. & Tayl.) Verd. *Fimbriaria australis* J.D.Hook. & Tayl.	S			‡
A. conocephala (Steph.) Schust. *Fimbriaria conocephala* Steph.	S			‡
A. drummondii (J.D.Hook. & Tayl.) Schust. *Fimbriaria drummondii* J.D.Hook. & Tayl.	S	N		
A. whiteleggeana (Steph.) Schust. *Fimbriaria whiteleggeana* Steph.		N		

Marchantiaceae

64. Marchantia L.

M. berteroana Lehm. & Lindenb. *Marchantia tabularis* Nees	S			(19)
M. foliacea Mitt. *Marchantia pallida* Steph. *Marchantia pileatea* Mitt.	S	N	I	
M. polymorpha L.	S			(19)

(19) The first authenticated record of *Marchantia polymorpha* from mainland Australia was not made until 1986 (at Buderim, Queensland) although the taxon had been previously collected from the Bass Strait islands and Tasmania (Scott 1985, Scott & Bradshaw 1986). Cited occurrences of *M. polymorpha* over the years had invariably turned out to be *Marchantia berteroana*. *M. polymorpha* originated from Europe but is now considered a cosmopolitan species. The Queensland specimens appear to be *M. polymorpha* var. *aquatica* Nees but this is not yet confirmed.

65. Dumortiera Nees					
D. hirsuta (Sw.) Nees *Marchantia hirsuta* Sw.			N		
Ricciaceae					
66. Riccia L.					
R. cartilaginosa Steph. *R. marginata* Carr. & Pears.	S			I	(20)
R. collata Na-Thalang				I	
R. multifida (Steph.) Steph. *Ricciella multifida* Steph. *Riccia burnettensis* Steph.	S		N		
R. muscicola Steph. *Ricciella muscicola* (Steph.) Steph.				I	
R. vesiculosa (Carr. & Pears.) Steph. *Ricciella bullosa* Link. var. *vesiculosa* Carr. & Pears.	S				‡
67. Ricciocarpus Corda					
R. natans (L.) Corda *Riccia natans* L.	S	C		I	

(20) There is some confusion regarding *Riccia cartilaginosa* – *R. marginata* synonomy (Na-Thaland 1980, Scott & Bradshaw 1986). The originally recorded binomial has been retained here.

ALPHABETICAL INDEX OF GENERA

APPENDIX A

Literature used in Compiling the Checklist

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